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*Metric Diophantine approximation on planar curves*

In 1998, Kleinbock and Margulis established the fundamental Baker-Sprindžuk conjecture concerning homogeneous Diophantine approximation on manifolds. Subsequently, the much stronger Khintchine-Jarník type theorem for non-degenerate planar curves has been established—thanks to Vaughan and Velani for the convergence theory and Beresnevich, Dodson and Velani for the divergence theory. Though, both approaches rely on estimates on the number of rational points with small denominators which are “close” to the curve, the two proofs differ quite significantly in nature. In this talk, I will try to describe a unified proof of the problem and some potential applications to the general case.